

# **THE INTEGRATION OF VISUALLY IMPAIRED STUDENTS**

A study guide to the sixth program in the ACCESS television inservice series  
*ONE GIANT STEP: The Integration of Children With Special Needs*





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*ONE GIANT STEP: The Integration of Children With Special Needs*





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*ONE GIANT STEP: The Integration of Children With Special Needs* is a ten-program, inservice series of videotapes. Each videotape has a running time of 15:00 minutes and is supplemented by a study guide. The program order numbers and titles are:

- BPN 2154    01 Introduction  
              02 The Integration of Dependent Handicapped Students  
              03 The Integration of Trainable Mentally Handicapped Students  
              04 The Integration of Educable Mentally Handicapped Students  
              05 The Integration of Learning Disabled Students  
              06 The Integration of Visually Impaired Students  
              07 The Integration of Hearing Impaired Students  
              08 The Integration of Physically Handicapped Students  
              09 The Integration of Gifted Students  
              10 The Integration of Behaviorally Disordered Students

(If you send a blank tape to the ACCESS NETWORK Media Resource Centre, there is no charge. If you prefer to buy tape from ACCESS, please send a purchase order to the Centre.)

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## PROGRAM SUMMARY

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This program documents the integration of two visually impaired students, Nick and Craig, into regular classroom settings. It includes a segment on gaining acceptance from fully sighted students for a visually impaired classmate, as well as segments outlining teachers' perspectives on integration, and on the modifications they have made to their classrooms and teaching techniques.

The program also emphasizes the vital role of the teacher aide in providing a bridge between the teacher and the visually impaired (VI) student.

## PROGRAM GOALS AND OBJECTIVES

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This inservice program is designed to assist teachers, school administrators, parents, and others to gain background information on VI students. It can be used as a base for effective integration of these students into the regular classroom environment.

**As a result of inservice, participants will be able to:**

1. define "visually impaired" and identify the VI student in terms of:
  - a. developmental characteristics
  - b. socio-emotional characteristics
  - c. learning characteristics.
2. identify the relevance of the Cascade Service Delivery Model in integrating VI students.
3. describe at least four teaching techniques that could be used in teaching VI students in an integrated setting.
4. list and describe, in general terms, resources, support services, and programs necessary to facilitate the education and integration of VI students.

## BACKGROUND INFORMATION FOR THE TEACHER OR WORKSHOP LEADER

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The degree to which a visual impairment affects this student varies, and thus the resulting educational implications also vary. The following definitions offer a guide.

**Visually Impaired:** This term is used to describe all students whose lack of vision, or restricted vision, interferes with their ability to learn unless special provisions are made.

**Blind/Braille-using:** For educational purposes, a student is considered to be blind and a Braille-user if, after all possible correction, his/her visual condition prohibits the use of print. This student requires special materials and curriculum adaptations, including the use of Braille and tape-recorded materials emphasizing the student's senses of touch and hearing.

**Partially sighted/Print-using:** For educational purposes, a student is considered to be partially sighted if, after all possible correction, his/her visual condition is such that special materials and curriculum adaptations are required but the student continues to use visual media, including print, in learning.

**Congenitally blind:** Born without sight.

**Adventitiously blind:** Loss of vision that occurs at any age due to accident or illness.

The regular classroom teacher whose students include a VI student is *not* expected to know Braille or to operate the special equipment required by that student. However, if the student is a Braille-user, it is valuable for the teacher to have a basic understanding of this system since reading tactually is very different from reading visually.

It is realistic for the teacher to expect the same *quality* of thought and work from the VI student as from his/her peers. The student should progress through the regular curriculum according to personal ability, special skills, and the application of those skills.

The teacher's acceptance of the VI student as a normal child, with the same potential to learn and to accept responsibility as his/her peers, will influence classmates to accept this student and to regard him or her as one of themselves.



## CHARACTERISTICS OF THE VISUALLY IMPAIRED STUDENT

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### 1. Developmental characteristics:

In many cases, partial vision is a normal condition for these students. They are unaware of what they cannot see and quickly develop coping skills, which often effectively disguise the handicap. This can result in inadequate assistance for them while their functional handicaps continue to increase. In such cases, it is possible that these students will be regarded as slow or retarded rather than visually impaired.

VI students experience life differently from their peers. For the latter, vision invites exploration and facilitates learning by imitation. Congenitally blind students lack this motivation and must be encouraged to reach out and move about so that they can explore and extend their environment. Direct intervention from infancy is essential.

### 2. Socio-emotional characteristics:

Students who are myopic (short-sighted) may become avid readers, despite their vision problems, but do not usually participate in sports. They can easily become isolated and require understanding and encouragement to facilitate their socialization and participation in various activities.

Students with severely restricted vision, when conversing with others, frequently invade the area regarded as "personal space", causing a vague uneasiness in persons with whom they are speaking.

Many teenage, partially sighted students may function well when moving about in daylight but experience difficulty in the evening. With the advent of darkness, these students may withdraw from activities, confining themselves to their homes. Orientation and mobility instruction could provide the assistance they require for full participation.

### 3. Learning characteristics:

#### a. Concept development

Restricted vision frequently subjects VI students to incomplete concept development in such academic work as mapping, diagramming, board work, demonstrations, and in understanding the natural environment, as, for example, the concept of trees, clouds, stars, and mountains.

It is difficult to imagine the congenitally blind student's concept of an apartment building. Even to acquire a concept of "room" poses problems, e.g., the student must be made aware of a ceiling through deliberate, direct contact with it. Unless this initial contact is repeated and reinforced, he or she may take time to arrive at the concept of a room that includes a ceiling. The student's concepts of intangibles such as "cloud" and "red" are often formed from chance experience and from snatches of conversation. While journeying on an airplane, this student may hear someone say the clouds are causing bumpiness. The student may be told that blood is red, or that he or she looks very nice in a red jacket. Some confusion is bound to occur, and these sketchy concepts will require extension through instruction.

#### b. Cognitive development

A VI student must rely upon any residual vision, plus other senses, for information about the world in which he/she lives. The knowledge gained from these senses is often incomplete and imperfect. Touch is only useful for those objects with which one can have direct contact. Hearing is only useful for gathering information about those things that emit some sound. Smell and taste yield less useful information because information that is gathered through these senses cannot be confirmed by vision.

## THE CASCADE SERVICE DELIVERY MODEL

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Originally, residential schools were the primary method for the delivery of educational services to VI students. However, provided appropriate support services are available, the integration of these children into regular school programs has proven to be the most effective method of education.

Integration is viewed along a continuum ranging from segregated institutional settings to full-time placement in regular classrooms, with all the intermediate steps suggested in the Cascade Service Delivery Model.



## CASCADE SERVICE DELIVERY MODEL\*

Regular classrooms with special-education instructional materials and/or aide. (Regular teacher retains full responsibility for each student's individual program and progress.)

Regular classrooms with special-education instructional materials, plus special-education consultative services to regular teacher.

Regular classroom with itinerant or school-based special education tutors. (Regular teacher retains full responsibility for each student's program and progress. Can obtain advice, etc.: from itinerant teacher.)

Regular classroom, plus special-education resource room and teacher

Regular teacher retains full responsibility. Child obtains intensive, short-term remedial work in resource room.

Regular classroom, plus part-time special class

Regular teacher retains responsibility. Child may obtain long-term support in the special class.

Full-time special class

Special-education teacher—full responsibility. Integration—wherever appropriate

Combination regular and special day school; no academic instruction in regular class

Same as above

Special day school

Same as above

Special boarding school or residential facility

Same as above

Hospital school

Same as above

Home-based instruction

Same as above

Pupil-Teacher ratio decreases

Pupil-Teacher ratio increases

\*Adapted from the Reynolds framework (1962)<sup>1</sup>, the Dunn model (1963)<sup>2</sup>, and the Deno cascade model of special education services<sup>3</sup>

<sup>1</sup>Reynolds, Maynard C. "A Framework for Considering Some Issues in Special Education" in *Exceptional Children*, Vol. 28, No. 7, March 1962, p. 368.

<sup>2</sup>Dunn, Lloyd M., ed. *Exceptional Children in the Schools: Special Education in Transition*. New York: Holt, Rinehart, Winston, 1963, p. 37.

<sup>3</sup>Deno, Evelyn. "Special Education as Developmental Capital" in *Exceptional Children*, Vol. 37, No. 3, November, 1970, p. 235.

# TEACHING TECHNIQUES

## 1. Concrete experiences

Full-sighted students develop many concepts through incidental learning. VI students, who frequently have a limited range and variety of past experiences, have not had these same opportunities for concept development. This development must begin with learning about self and the environment. Many varied, repeated, and reinforced concrete experiences with everyday objects and situations are essential. Models or replicas provide opportunities to explore, but the real thing is preferable, e.g., using real fruit instead of plastic versions.

Embossed pictures (raised line illustrations) are semi-abstract. They are useful as outline representations for such simple figures as a fork, a leaf, or a hand, but should *never* be used to illustrate depth perception.

At times, VI students demonstrate verbal unreality, as in speech patterns that include the names of things without any real experience or idea of their meaning. It occurs when there has been a lack of concrete experiences, a surplus of vicarious or rote learning, and an emphasis on visual imagery. Opportunities for daily conversational interactions, which clarify misconceptions and build meaningful vocabulary, will assist the VI student in overcoming this problem.

## 2. Unifying experiences

VI students are at a serious disadvantage in experiencing objects and situations in their totality. For the fully-sighted, vision permits a unification of all observations and confirms and organizes impressions received from other sensory channels. VI students most fully experience objects that are relatively small in size and close to them. Large objects such as airplanes and apartment buildings are only partially experienced. Many objects, such as stars, can only be described to these students. Concepts may become fragmented and disassociated. The teacher must provide opportunities for the VI student to experience situations in their totality and to unify partial experiences into meaningful wholes. Lessons structured to emphasize how things relate to each other are helpful.

## 3. Learning by doing

Because Braille-using students are not visually stimulated to imitate the activities of others and

rarely initiate activity, they may appear passive. They still need to learn the many routines of daily living and to grow toward increasing independence and self-responsibility. They will require extra motivation in order to be made aware of the reasons for doing activities. All attempts to initiate activities, particularly during younger years, should be encouraged and appropriately reinforced.

## 4. Teaching aids and media

**a.** Chalkboard use. For the partially-sighted student, the teacher should:

- read aloud what is being written on the chalkboard.
- keep the chalkboard clean to allow for good contrast.
- avoid using pastel-colored chalks.
- write with a bold stroke.
- be alert to glare from the chalkboard.
- allow the student to sit wherever he or she can best see the chalkboard.
- allow the student to walk up to the board when necessary.

**b.** Maps, diagrams, and models. VI students should have a learning experience with the "real thing" whenever possible. Complicated information such as is found on a weather map could be simplified for them by having portions of the information placed on two or three separate, raised-line or large-print maps.

When models are used, these should contain only essential details, be easily discernible tactually for Braille-users, and have clear, color contrast for partially-sighted students.

**c.** Film, television, and slide-tape presentations. VI students enjoy audio-visual materials, as do their fully sighted peers. The partially-sighted student should be in the best position to see the screen. This student is often the best judge as to location. Arrangements could be made to have a "buddy" preview the film, or read a description of it to a blind student. Prior to the viewing, a fully-sighted buddy should be nearby in order that explanation of the action can be provided as necessary.



During the follow-up, allow for discussion with the student to ensure that the primary objectives of the audio-visual presentation are understood.

- d. Overhead projector. It is recommended that the teacher read aloud what is being written on the overhead. Consideration should be given to employing a fully-sighted buddy, or providing the VI student with a copy of the material in print, Braille, or sound-recording format.

It may be advantageous for the partially-sighted student to look at the illuminated transparency on the overhead rather than the projected image on the screen.

## 5. Student notes

VI students should have organized, useful notes for future reference and study. Depending upon the task and situation, various methods are appropriate in the creation of these notes.

- a. A buddy can be assigned to copy notes, using pressure-sensitized paper and a convenient binder. No additional work is required from this volunteer since the second or copy sheet is simply given to the VI student. Once this student has received a copy of the notes, he or she can read them if able to do so, or have someone else (the buddy, friend, or family member) read them aloud. Or, the notes could be read into cassette tapes for future reference. These tapes should then be appropriately labelled and filed by the student.

The teacher should ensure that the VI student is involved in some constructive, topic-related activity while classmates are copying notes from the chalkboard.

- b. Teacher notes. The teacher may wish to provide the VI student with a photocopy of notes when appropriate.
- c. Spirit duplicator copies. Ditto sheets are rarely legible for partially-sighted students. When possible, either felt pen, primary type, or a photocopy of the original should be used for good black on white contrast. If a blue ditto sheet is absolutely necessary, the best copy should be selected. The student should then cover the sheet with a clear yellow plastic page protector, thereby increasing the intensity of the print.

- d. Direct creation of own notes. The VI student should be responsible for developing notes of lectures, discussion, and research readings in whatever form is most convenient to use, e.g., Braille, typed, or felt-pen. These will usually be very brief in comparison to the notes of classmates. However, since most VI students at senior grade levels will have developed good recall and memory skills, the most pertinent points should trigger recall of supportive detail.

*The Visually Impaired Curriculum Guide* (Alberta Education, 1982) includes specific teaching strategies for the educational objectives that are unique to VI students. The regular classroom teacher, however, is advised to contact the itinerant teacher, or an Alberta Education consultant for the visually impaired, regarding further strategies or modifications.

## CONTENT OF THE EDUCATIONAL PROGRAM FOR THE VISUALLY IMPAIRED

The content of the academic program does not vary for the VI student, although certainly the methods of presentation may. Academic skills, however, represent only one aspect of the VI student's total education. It is essential that a program include living vocational skills, such as: activities that emphasize daily living, socialization, career awareness, orientation, and mobility. It is these activities that will help the VI student develop into a responsible and independent adult.

*The Visually Impaired Curriculum Guide* (Alberta Education, 1982) provides many helpful suggestions, guidelines, and teaching techniques in both the areas of academic skills and living/vocational skills. The *Guide* is highly recommended as a resource for the teacher who has one or more students in a regular class.



## SERVICES FOR THE VI

### INSTITUTION OR AGENCY

Low Vision Clinic, Calgary  
D.A.T. Centre  
Alberta Children's Hospital  
1820 Richmond Rd. S.E.  
Calgary, Alberta

Glenrose Hospital  
10230 - 111 Avenue  
Edmonton, Alberta C56 0B7  
Phone: 471-2262

### Materials Resource Centres (MRC):

NMRC—Edwards Professional Bldg.  
1st Floor  
10053 - 111 Street  
Edmonton, Alberta T5K 2H8  
Phone: 427-4681

SMRC—Room 230, Simba Bldg.  
1220 Kensington Rd. N.W.  
Calgary, Alberta T2N 3P5  
Phone: 261-4378

### Itinerant Teacher Service for the VI

Calgary Public Itinerant Teachers  
c/o Dr. Karl Safran School  
930 - 13 Avenue S.E.  
Calgary, Alberta T2R 0L4  
Phone: 244-1696

Calgary Separate Student Services  
c/o St. Leo's School  
6220 Lakeview Dr. S.W.  
Calgary, Alberta T3E 5T1  
Phone: 249-3717

Edmonton Public Itinerant Teachers  
c/o Strathern School  
8728 - 93 Avenue  
Edmonton, Alberta T6C 1T7  
Phone: 468-5570

Edmonton Separate Itinerant Teachers  
9807 - 106 Street  
Edmonton, Alberta T5K 1C2  
Phone: 469-7631

### Alberta Education: Consultants for the Visually Impaired

Calgary Regional Office of Education  
1200 Rocky Mountain Plaza  
615 Macleod Trail S.E.  
Calgary, Alberta T2G 4T8  
Phone: 261-6353

### SERVICES PROVIDED

- special near, and distance, visual aids
- an assessment centre for the visually impaired

#### Special equipment:

- closed-circuit television readers
- Stokes Place holder, etc.
- reading stands

- consultation and inservice concerning visual impairment, programming, placement, and funding
- direct service to administrators, teachers, parents, and VI students

**INSTITUTION OR AGENCY****SERVICES PROVIDED**

Edmonton Regional Office of Education  
10053 - 111 Street  
Edmonton, Alberta  
Phone: 427-2952

**Canadian National Institute for the Blind (CNIB)**

CNIB Calgary  
1260 Memorial Dr. N.E.  
Calgary, Alberta T2E 4Z3  
Phone: 266-8831

CNIB Edmonton  
12010 Jasper Avenue  
Edmonton, Alberta T5J 2L4  
Phone: 488-4871

**Alberta Society for the Visually Impaired (ASVI)**

ASVI Calgary  
3711 - 58 Avenue S.W.  
Calgary, Alberta T3E 5H8  
Phone: 242-1855

ASVI Edmonton  
6920 - 93 Avenue  
Edmonton, Alberta T6B 0E4  
Phone: 469-4113

- bursaries, parent support

## PREVIEWING QUESTIONS

These questions are designed to allow participants to explore their feelings toward the VI. For maximum benefit, it is suggested that participants discuss one or more questions in small-group settings, then share their ideas in the larger group.

1. What sight/sights would you miss most if you were to lose your vision?
2. A blind child is enrolled in the same class as your fully-sighted child. The teacher has sent you a personal note asking if you would object to your child being employed as a buddy. Would you? Why or why not?
3. List a variety of jobs where being visually impaired would not be a problem.
4. Which of the following would you rather be, and why?
  - a. blind or deaf
  - b. blind or physically handicapped
  - c. blind or mentally handicapped.
5. If you were visually impaired, could you hold the same job you do now? Why or why not? How might you be able to adapt to meet the job requirements?

## PREVIEWING ACTIVITIES

The following activities are taken from the *P.A.T.H. (Positive Attitudes Toward the Handicapped)* kit, and are used courtesy of the Regional Resource Service, Calgary, Alberta. The kit is available at the following address:

Calgary Regional Office of Education  
1200 Rocky Mountain Plaza  
615 Macleod Trail S.E.  
Calgary, Alberta T2G 4T8  
Telephone: 261-6353

### 1. Limited vision

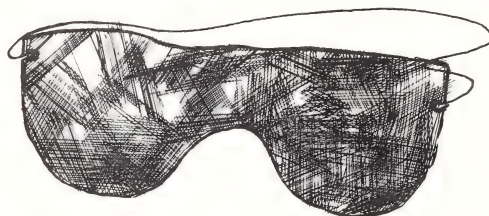
There are many degrees of visual impairment; not all people who are visually impaired can see the same things. Sometimes, if the impairment is mild, the person can wear correctional glasses and function quite well. More severe impairments include tunnel vision, which means that the eyes see the central object of focus very clearly but are unable to see to either side. Also, there are some visually impaired people who can see shadows or distinguish between light and dark,

but cannot identify objects. This activity will help you understand the limitations of some visual impairments.

**Materials required:** Saran Wrap masks (or glasses, as described below); cards with various size print; puzzles.

To make Saran Wrap masks, you will need heavy construction paper, Saran Wrap, and tape. Cut out the construction paper in the shape of eye-masks (see diagram below). Make a series of masks by wrapping an increasing number of layers of Saran Wrap over the eye holes. The more layers of Saran Wrap there are, the greater the visual impairment. You can also make masks simulating tunnel vision with black construction paper cut in the same mask shape; however, leave the eye part complete. Poke a hole in the centre of each side of the mask, approximately this size (•), with a pen tip or a pencil.

Shadow vision can be roughly simulated by looking through a piece of exposed film. Safety glasses can also be used. Degrees of visual impairment are created by spreading various amounts of glue over the lens.



**Activity:** Using the Saran Wrap masks, have participants try reading the various cards. (Try different masks for greater visual impairment—e.g., tunnel vision, shadow vision.) Ask them to stand at different distances from the cards. Or try putting a puzzle together.

### Invite participants to discuss the following:

How did you feel walking with the masks on?

Which cards (or print materials) were easier to read?

How would you feel if your vision were always like this, even with the help of glasses?

### 2. What's in the Bag?

Many VI people depend upon their tactile sense to identify objects. Some are easier to recognize than others. For example, a chair feels quite a bit different from a book, but does a math book feel all that different from, say, a science book?



Learning to tell what objects are by what they feel like is termed tactile discrimination. It involves feeling the size, shape, texture, temperature, edges, and movable parts, etc. of an object.

**Materials required:** blindfolds; bag with various items in it (button, umbrella, paper clips, pen, safety pin, penny, small toys, card, apple, peach, paper money of different denominations, etc.).

**Activity:** Have participants blindfold themselves. Ask them, one at a time, to place a hand in the bag and try to identify some of the objects they touch.

**Invite participants to discuss the following:**

Were some objects more difficult to identify than others? Why?

Could you tell how much money you had in coins? How about the dollar amount of paper bills? (Visually impaired people often have their paper money folded in certain ways. This helps them to distinguish a five-dollar bill from a ten-dollar bill, and so on. The bills, are folded, of course, with the aid of a sighted person.)

### 3. Name and Address, Please!

The visually impaired have many aids and devices to help them do everyday things. Although they use a system of writing called Braille, there are many times when other people need to read their writing. Sometimes a typewriter can be used; however, everyone must be able to sign their name. (Think of situations where one needs to be able to write their signature on a dotted line.) Signature guides are available for people with visual impairment. These are small devices, either wire or plastic, which can be carried in a pocket. In effect, the signature guide provides a tactile line for the VI person to use as a guide.

**Materials required:** lined paper and pencils.

**Activity:** Hand out the lined paper and pencils. Ask participants to close their eyes and write their name and address on the paper while staying within the lines.

**Invite participants to discuss the following:**

How well did you do?

What difficulties did you encounter?

What are some situations where you would need to be able to sign your name on the line?

### 4. Floor, Please?

There are many everyday situations and places that prove to be more handicapping to the visually impaired individual than need be. One such situation is simulated in this activity.

**Materials required:** blindfolds; simulated elevator buttons.

**Activity:** Organize participants into pairs. One partner in each pair is blindfolded. Instruct the "guide" to lead the "blind" person into an imaginary elevator and ask him/her to press the button for a certain floor.

**Invite participants to discuss the following:**

Was it easy for the "blind" person to know which button to press?

If the elevator made numerous stops before reaching the desired floor, how could you, as a blind person, tell which was your stop?

How could the buttons be made more useable by a blind person? (Tactile devices on the buttons could help blind people tremendously. If a VI person uses the same elevator frequently, then he/she remembers which button to press. If the elevator makes frequent stops, it is helpful if a sighted person on the elevator calls the floor number out loud.)

## POST-VIEWING QUESTIONS

1. What does Craig have in common with his classmates?
2. How does Nick benefit from being with non-handicapped peers? Do you see any benefits for the non-handicapped peers?
3. What would the major obstacles be if you were to have a visually-impaired student join your class? Name some ways of overcoming these obstacles.
4. If you were visually impaired, what would be a problem to you in your daily routine? How would you overcome it?
5. If you were blind, how could you use your other senses to compensate for the loss of sight?

## POST-VIEWING ACTIVITIES

These activities are intended to give participants practical suggestions on how to experience success when working with VI students. It is recommended that the activities be carried out in small groups, which then report back to all the participants.

Some of the following activities were taken from the *P.A.T.H. (Positive Attitudes Toward the Handicapped)* kit and are used courtesy of the Regional Resource Service of Alberta Education, Calgary, Alberta.

### 1. Description

It is often difficult for VI students to understand what things really look like. A clear and accurate description can help them gain a mental picture of what is in the world around them.

**Materials required:** a participant's personal possession, or an object in the classroom.

**Activity:** Organize the group into pairs. One partner is "blind", the other sighted. Ask the latter to choose an object to describe to his/her partner. The item cannot be named, just profiled in the form of descriptive clues to help the "blind" partner decide what the item is. The "blind" person must assume that he/she is congenitally blind and has to ask for clarification when the clues tend to rely on visual experience.

**Invite participants to discuss the following:**

Was this activity more difficult than you had imagined?

Did the "blind" partner guess what the object was?

Do you think he/she did so by relying, even subconsciously, on visual memory?

### 2. Tactile

The sighted often assume that the blind can learn much more than they actually can from exploring objects with their fingers.

**Materials required:** blindfolds; unusual objects, e.g., perfume bottles, vases, dried flowers, etc.; paper and pencils.

**Activity:** All members of the group are blindfolded. Give each of them an object to touch. Take the object away and supply each participant with a piece of paper and a pencil. Ask everyone to draw a picture of their object and label it for what they think it is.

**Invite participants to discuss the following:**

How did this activity feel?

Was any member of the group able to draw the object in question accurately and also identify it?

### 3. A Rose is a Rose is a...

The sense of smell is probably the sense least likely to give the VI person information. Of course, some smells are easily identified, like coffee. Others are less obvious, for instance, the difference between an air-freshener spray and a deodorant.

**Materials required:** rags; small numbered sacks; the scent of hair spray; air freshener; deodorant; furniture polish; perfume; paper and pencils.

**Activity:** Spray generous amounts onto a rag before putting it in a sack. Pass around the sacks. Ask participants to identify the scents. Beside each number, have participants write what they think the scent is.

**Invite participants to discuss the following:**

How accurate was your assessment of what was in each sack?

Do you think it would be wise to count solely on smell to get prepared for work in the morning? To clean house? To add spices to a meal?

### 4. Snack Time

Visually-impaired people do many of the same everyday things as those who can see, e.g., pouring their own milk, combing their hair, finding their shoes, etc. However, because they cannot see, they have to do these things a little differently. Quite often, they must use their sense of touch instead of their eyes.

**Materials required:** blindfolds; pitchers; cups; napkins; plastic cutlery; crackers; peanut butter or jelly. (As this exercise can sometimes be messy, it might be advisable to have a sponge and some towels handy.)

**Activity:** Organize the group into pairs. One partner is blindfolded. The other is a sighted guide, who leads the "blind" person to the table and puts his/her hand on a chair so that he/she can sit down. The guide then puts the "blind" person's hands on the cutlery, cups, etc. so as to acquaint the blind person with exactly where everything is and thus be able to eat. Stress that the guide is a helper and is not to do everything for the "blind" person, who must learn to cope. (You may want to point out that a blind person often needs help from someone unfamiliar with a room. However, at home, a VI person would use memory as well as touch to find things and do things.)

Ask the “blind” person to pour a cup of water, spread some peanut butter on a cracker, eat the cracker, and clean up. (You may want to demonstrate how a blind person pours a glass of juice or milk. He or she holds the cup on the table with the index finger just inside the lip of the cup, then slowly pours the liquid until it reaches the finger.)

#### Invite participants to discuss the following:

What was it like to be blind? Did you have a problem sitting down?

How did you know when to stop pouring?

Was it easy to tell what things were by using your sense of touch?

What was difficult about being the guide?

### 5. Trust Walk

One way in which VI people get around is with the help of a sighted guide. When walking with a guide, the visually impaired person takes the guide’s arm at the elbow so that he or she is always walking slightly ahead. In this way, the blind person can follow the guide’s body movements, stopping or slowing down as necessary. The guide never leaves the blind person without explanation; the guide also explains where they are and what they are coming to, e.g., a curb, steps, or doorway, etc.

Learning to walk with a sighted guide is one part of what is called mobility training. This training is a very important part of VI children’s education in addition to math, science, physical education, etc. Sometimes a visually-impaired person will count the number of steps from one place to another, e.g., from the sink to the kitchen table. After walking this route several times, he or she no longer needs to count the number of steps; instead, “muscle memory” is used. Subconsciously, the person knows how far it is from the sink to the table; this too, is a part of mobility training.

**Materials required:** blindfolds; file cards with directions.

#### Sample direction cards

2. Take your “blind” person to the washroom. Guide them over to the sink so that they can wash their hands. Guide them back again.

3. Guide your “blind” person around the building. Be sure to mention if there are stairs ahead or some other obstacles in the way.

**Activity:** Organize the group into pairs. One partner is blindfolded. The other is the sighted guide. Each guide has a different card and follows what the card says.

#### Invite participants to discuss the following:

What was it like to be blind? Did you want your partner to do everything for you?

What did you notice while you were blind?

How did it feel to take the blindfold off?

What did it feel like to be the guide? What was difficult about it?

1. Guide your visually impaired partner around the room. Be sure to indicate any obstacles that might be in the way. Guide your partner to a chair and have him/her sit down.



## GLOSSARY

**adventitious blindness.** Blindness that occurs after a person has experienced sight.

**atrophy of the optic nerve .** A term that covers a multitude of possible defects in the nervous system between the eye and the brain centre.

**aqueous humor.** A clear, watery fluid that fills the space between the cornea and the lens.

**auditory sense.** The experience of hearing.

**cataract.** Cloudiness of the lens that causes partial or total blindness.

**congenital blindness.** Loss of vision from birth.

**cornea.** The clear, transparent curved portion of the outer coat of the front of the eyeball.

**diabetic retinopathy.** Disease of the retina caused by diabetes.

**glaucoma.** A disease of the eye marked by increased pressure within the eyeball, which causes gradual loss of vision.

**hyperopia.** A condition of the eye inducing refractive error, whereby distant objects are seen more clearly than those close at hand.

**iris.** The colored, circular part of the eye in front of the lens which controls the size of the pupil.

**kinesthetic.** Pertaining to the sense of bodily position, presence, or movement as communicated by nerve endings located in muscles, tendons, and joints.

**legal blindness.** A central visual acuity of 6/60 or less in the better eye after correction (see **visual acuity**). Or central visual acuity of more than 6/60 if there is a field defect in which the peripheral field has contracted to such an extent that the widest diameter of visual field subtends an angular distance no greater than 20 degrees.

**monocular.** Adapted for use with only one eye.

**myopia.** An eye defect in which distant objects appear blurred; near-sightedness.

**olfactory.** Pertaining to the sense of smell.

**optacon.** An electronic device that enables the visually impaired to read regular print, which is converted to tactile points.

**ophthalmologist.** A physician who specializes in the diagnosis and treatment of defects and diseases of the eye.

**optician.** A person who makes lenses and eyeglasses.

**optic nerve.** The special nerve which carries messages from the retina to the brain.

**optometrist.** A licenced, non-medical practitioner who examines, measures, and treats certain visual defects by means of corrective lenses or other methods not requiring medical licensing.

**prescription cane.** An aluminum or fiberglass cane about 1/2 inch in diameter. Its length is determined by the user's height, length of stride, and convenience.

**pupil.** The apparently black, circular opening at the centre of the iris.

**residual vision.** The amount of vision that remains after damage to the optic system.

**retina.** The delicate, many-layered, light-sensitive membrane lining the inner eyeball and connected by the optic nerve to the brain.

**tactile.** Pertaining to the sense of touch.

**trachoma.** A contagious viral infection of the eye which, untreated, can cause blindness.

**tunnel vision.** An impairment of the peripheral area of the eye, resulting in very clear central vision at a specific point of focus, but an inability to see to either side.

**visual acuity.** A clinical measurement of the ability to discriminate clearly the fine details of objects or symbols at a specified distance. For example, 6/6 means that an individual sees at 6 metres what is normally seen at 6 metres. 6/60 means that an individual sees at 6 metres what is normally seen at 60 metres. Acuity figures can be equated with print size for near vision.

**visual perception.** The term that refers to the factors involved in processing and in making meaningful interpretation of all messages received through the visual sense.

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## GETTING THE MOST FROM A VIDEO PRESENTATION

An educational television program can be an effective and stimulating learning resource. Because of its ability to convey information and meaning through scenes and sounds, television is one of the most effective classroom tools at your disposal. In addition, support materials are available for a number of ACCESS NETWORK programs. Many of these materials—which include student teacher guides and manuals, slides, transparencies, filmstrips, posters, etc.—contain suggestions for previewing and post-viewing activities.

Many teachers have found that the effectiveness of video programming can be enhanced in the following ways:

1. Use the **stop** and **pause** buttons frequently to highlight program segments. This will help break the passive viewing habit created in students by commercial TV and focus their attention on your purpose for showing the program(s).
2. Use the **counter** to prepare for the viewing session. Set it to zero at the start of a program. This will help pinpoint the location of segments to be reviewed later. You can then create a **log** by jotting down the counter numbers that correspond to important segments.
3. Be specific about viewing objectives **before** showing the program. Students will be able to focus their attention better if they are aware of what to look for in a videotape. Prepare a list of guideline questions on the blackboard or on photocopied handouts. (Be sure to cover all of the questions in post-viewing activity.)
4. Since educational television programs generally include more material than can be digested in a single viewing, show the program in its entirety once and then, after clarifying vocabulary difficulties and reviewing specific learning objectives, show selected portions a second, even a third, time. Again, the stop and pause buttons can be used to allow students to take notes—or focus attention on a particular item of importance.
5. Television programs consist of **both** audio and video signals, and viewers often need to be stimulated in order to derive maximum information from both. During the second viewing of a program segment, you can stimulate the development of viewing and listening skills by showing the picture but turning off the sound and asking for recall of audio information. Alternatively, leave the sound on but eliminate the picture.
6. Both for viewing comfort and for note-taking convenience, TV should not be viewed in a dark room. However, light can also be a problem, so the television set should be located to avoid window reflection on the screen. To eliminate ceiling-light reflection, tilt the set forward slightly.
7. Ensure that all students have a clear line of sight to the set. If necessary, alter seating arrangements to give every student a satisfactory view of the screen.
8. Adjust the controls of the TV set to ensure good color balance, adequate brightness, and contrast.
9. In some cases, it is useful to have tapes and equipment available for independent viewing by individual students.





